

What is claimed is:

1. A nonaqueous electrolyte secondary cell comprising a positive electrode, a negative electrode, a nonaqueous electrolyte, a separator interposed between the positive electrode and the negative electrode, the positive electrode having a positive electrode active material comprising a chemical compound capable of reversibly intercalating lithium and the negative electrode having a negative electrode active material comprising a material capable of reversibly intercalating lithium, wherein the separator has through holes for passing lithium dendrites therethrough.

2. The nonaqueous electrolyte secondary cell according to claim 1, wherein the through holes have a substantially straight line-shape and the positive electrode and the negative electrode are connected thereby.

3. The nonaqueous electrolyte secondary cell according to claim 2, wherein the through holes are such that the positive electrode and the negative electrode are connected in the shortest possible distance.

4. The nonaqueous electrolyte secondary cell according to claim 1, wherein the through holes have a diameter of 5 μm or greater.

5. The nonaqueous electrolyte secondary cell according to claim 2, wherein the through holes have a diameter of 5 μm or greater.

6. The nonaqueous electrolyte secondary cell according to claim 3, wherein the through holes have a diameter of 5 μm or greater.

7. The nonaqueous electrolyte secondary cell according to claim 4,

wherein the through holes have a diameter of 100 μm or less, and preferably 70 μm or less.

8. The nonaqueous electrolyte secondary cell according to claim 5,
wherein the through holes have a diameter of 100 μm or less, and
5 preferably 70 μm or less.

9. The nonaqueous electrolyte secondary cell according to claim 6,
wherein the through holes have a diameter of 100 μm or less, and
preferably 70 μm or less.

10. The nonaqueous electrolyte secondary cell according to claim 4,
10 wherein the through holes have a diameter of 50 μm or less.

11. The nonaqueous electrolyte secondary cell according to claim 5,
wherein the through holes have a diameter of 50 μm or less.

12. The nonaqueous electrolyte secondary cell according to claim 6,
wherein the through holes have a diameter of 50 μm or less.

13. The nonaqueous electrolyte secondary cell according to claim 4,
15 wherein the through holes have a diameter of 30 μm or less.

14. The nonaqueous electrolyte secondary cell according to claim 5,
wherein the through holes have a diameter of 30 μm or less.

15. The nonaqueous electrolyte secondary cell according to claim 6,
20 wherein the through holes have a diameter of 30 μm or less.

16. The nonaqueous electrolyte secondary cell according to claim 1,

wherein the through holes are provided at a density of one through hole per square centimeter or more.

17. The nonaqueous electrolyte secondary cell according to claim 1, further comprising a conductive polymer provided between the separator
5 and the positive and negative electrode active materials.

18. A nonaqueous electrolyte secondary cell comprising a positive electrode, a negative electrode, a nonaqueous electrolyte, a separator interposed between the positive electrode and the negative electrode, the positive electrode having a positive electrode active material comprising a
10 chemical compound capable of reversibly intercalating lithium and the negative electrode having a negative electrode active material comprising a material capable of reversibly intercalating lithium, wherein the separator comprises through holes having a diameter of 5 μm or greater.

19. The nonaqueous electrolyte secondary cell according to claim 18,
15 wherein the through holes have a diameter of 100 μm or less, and preferably 70 μm or less.

20. The nonaqueous electrolyte secondary cell according to claim 19, wherein the through holes have a diameter of 50 μm or less.